

Ace Thoressa sitala de Nicéville and the Evershed's *Ace T. evershedii* Evans, 1910. We cannot assess relevant conservation issues for these butterflies if we do not have any information about them. Considering the rapid habitat degradation and destruction that is taking place in the biologically diverse southern Western Ghats, I hope such basic information on these species will be available soon through a more collaborative effort from naturalists in southern India. This will ultimately help us protect these endemics and their habitats.

ACKNOWLEDGEMENTS

I thank V.V. Sivan for his help in identifying the host plants, and Deepa Agashe, Ramana Athreya, S. Kalesh, Satya Prakash and C. Susanth for comments on an earlier draft of the manuscript. Thanks are due to the Principal Chief Conservator of Forests (Tamil Nadu) for granting research permission, and to the local staff of the Forest Department at the Indira Gandhi National Park and Wildlife Sanctuary, the Anamalai Hills, for providing local permits and cooperation.

REFERENCES

- BELL, T.R. (1927): The common butterflies of the plains of India (including those met with in the hills stations of the Bombay Presidency). *J. Bombay Nat. Hist. Soc.* 31: 951-974.
- EVANS, W.H. (1910): A list of the butterflies of the Palni Hills with the descriptions of two new species. *J. Bombay Nat. Hist. Soc.* 20: 380-392.
- EVANS, W.H. (1932): The Identification of Indian Butterflies (2nd ed.). Bombay Natural History Society, Mumbai. Pp. 454.
- KUNTE, K. (2000): Butterflies of Peninsular India. Universities Press (Hyderabad) and Indian Academy of Sciences (Bangalore). Pp. 254.
- LARSEN, T.B. (1988): The butterflies of the Nilgiri mountains of southern India (Lepidoptera: Rhopalocera). *J. Bombay Nat. Hist. Soc.* 85: 26-43.
- UGARTE, E. & L. RODRICKS (1960): Butterflies of the Palni Hills: a complementary list. *J. Bombay Nat. Hist. Soc.* 57: 270-277.

13. RANGE EXTENSION OF THE WAVY MAPLET
CHERSONESIA INTERMEDIA (NYMPHALIDAE, LEPIDOPTERA),
FROM PAKKE TIGER RESERVE, ARUNACHAL PRADESH, INDIA¹

KRUSHNAMEGH KUNTE²

¹Accepted November 06, 2007

²Section of Integrative Biology, University of Texas at Austin, 1 University Station, C 0930, Austin, TX 78712, USA.
Email: krushnamegh@gmail.com

Tribe Cyrestini (Nymphalidae, Lepidoptera) is represented in India by two genera: (a) *Cyrestis* Boisduval, 1832, and (b) *Chersonesia* Distant, 1883; commonly known as Maps and Maplets. Of these, *Chersonesia* is highly restricted in distribution: *Chersonesia risa* (Doubleday, 1848), the Common Maplet, occurs in the Himalaya from Kumaon and Nepal eastward to north-east India, extending to Indo-China and south-east Asia (Smith 1989). *Chersonesia intermedia* Martin, 1895, the Wavy Maplet, is also distributed in Indo-China and south-east Asia, but is more restricted in India. It has been collected from Manipur and Naga Hills in north-east India and is reportedly very rare (Evans 1932; Wynter-Blyth 1957). Note that the subspecies of *C. intermedia* that occurs in NE India, i.e. *C.i. rahrioides* Moore, 1896, was previously treated under *C. rahria* (Evans 1932). *Chersonesia rahria* (Moore, 1858), as currently classified, does not occur in India.

On May 30, 2007 I photographed *C. intermedia* mud-puddling in a stream-bed running through the evergreen forest on the road to Khadi in Pakke Tiger Reserve in West Kameng district of Arunachal Pradesh. The species could be easily

distinguished from *C. risa* in having: (a) the fifth line on the upper side of the wings reddish-brown and diffused, and (b) the sixth line from the wing-base curved and prominently angled near costa (Evans 1932; Wynter-Blyth 1957; Corbet and Pendlebury 1992; Pinratana and Eliot 1996). The fifth and sixth lines in *C. risa* are black, straight and of equal width, similar to the first four lines.

The precise localities from which *C. intermedia* was previously collected in Manipur are unknown but the sighting reported here comprises the first record of the species from Arunachal Pradesh and in the eastern Himalayas, at least 400 to 600 km away from the previously known distributional range of the species. It will be useful to find out whether the species also occurs in the Brahmaputra valley in Assam or whether it reaches Pakke only through the forested mountains of the south-eastern and northern Arunachal Pradesh.

The field trip on which this sighting was made was funded by the American Philosophical Society's Lewis and Clark Fund for Exploration and Field Research. Local arrangements made by Mr. Tana Tapi, DFO, Pakke TR, are gratefully acknowledged.

REFERENCES

- CORBET, A.S. & H.M. PENDLEBURY (1992): The Butterflies of the Malay Peninsula. Kaula Lumpur, Malayan Nature Society. pp. 595.
- EVANS, W.H. (1932): The Identification of Indian Butterflies. Mumbai, Bombay Natural History Society. pp. 454.
- PINRATANA, A. & J.N. ELIOT (1996): Butterflies in Thailand. Vol. 3. Bosco Offset, Bangkok, pp. 140.
- SMITH, C. (1989): Butterflies of Nepal (Central Himalaya). Tecpress Service L.P., Bangkok. Pp. 352.
- WYNTER-BLYTH, M.A. (1957): Butterflies of the Indian Region. Mumbai, Bombay Natural History Society. pp. 523.

14. INTRASPECIFIC COLOUR VARIATION IN SPIDER *PARAWIXIA DEHAANII* (DOLESCHALL) (ARANEIDAE; ARANEAE), A CASE STUDY IN SANJAY GANDHI NATIONAL PARK, BORIVLI, MUMBAI, MAHARASHTRA, INDIA¹

DHARMENDRA KHANDAL² AND D.B. BASTAWADE³

¹Accepted December 04, 2003

²C/o Mr. R.S. Sharma, Kalyan Market, Ramgarh-Swhekhawati, Sikar 331 024, Rajasthan, India.

Email: khandal_d@yahoo.com

³Zoological Survey of India, Western Regional Station, Acurdi, Pune, Maharashtra, India.

The Araneid genus *Parawixia* was raised by F.O.P. Cambridge in 1904 with the type species *P. descripta* (F.O.P. Cambridge); the genus has a wide range of distribution in South America, Mexico, India, Malaysia and Japan. *P. dahanii* (Doleschall) is the only known Indian species so far reported from Karnataka, West Bengal, Gujarat and Sikkim states. The present report is the first report from Maharashtra in Sanjay Gandhi National Park, Borivli, Mumbai. Recently, the species has been reported by about 15-16 female specimens almost in the same locality of SGNP. It was very surprising to note the different colour morphs among the same population of this species.

The broad identification characteristics of *Parawixia dehaanii* (Doleschall) total body size ranges between 18-22 mm in length, cephalothorax longer than wide, narrowing in front, typically clothed with white pubescence in middle portion, spines and hair with granular base on cephalic region elevated in the middle, forming a bulge just behind the ocular area, ocular quad slightly wider in front than behind and situated on elevation, lateral eyes nearly same in size, placed closely and situated at the base of horn-like tubercles; chelicerae strong, reddish-brown with moderate boss at the base; legs long and strong without band but darker on tarsi; abdomen triangular acutely pointed posteriorly and on anterior lateral spine like shoulder humps, five pairs of sigilla on dorsum arranged mid-longitudinally, epigynum with swollen base provided with stout, beak-like pointed, unwrinkled scape, bent at right angle with the base.

The described colour pattern shows chalk white transverse band extending between the pair of anterior lateral shoulder humps, dark brown on rest of the abdomen dorsum, ventrum grayish brown patches (Fig. 1a).

The female specimens recently collected at SGNP show four variants of abdominal colour pattern.

(1) Abdomen grayish with light brown tinge and a conspicuous 'V' like darker brown patch in the center of the abdomen giving more pointed appearance to the anterior lateral shoulder humps (Fig. 1b).

(2) Abdomen is completely light reddish brown with only two white dots between the anterior lateral shoulder humps. (Fig. 1c).

(3) Abdomen yellowish brown with some black patches in 'V' shape manner and rest of the abdomen blackish (Fig. 1d).

(4) Abdomen completely blackish brown without any markings (Fig. 1e).

The colour morphs in spider are known and have been discussed by different workers, unfortunately except Tikader, there are almost no authentic reports on such aspects from India. Tikader (1982) have reported as many as 18 colour morphs in *Neoscona mikerjai* (Tikader), a common colonial species in and around Pune city (Maharashtra). Campon (2001) reported colour variations in the colonial species *Parawixia bistrata*, he states that adult females are present in two distinct colour morphs (brown and yellow opisthosomes), which make the individuals cryptic on the substrates they are found during their solitary stage prior to oviposition; leaf substrates or on the branches and trunks of trees. His experiment showed that the yellow morph individuals exhibit substrates preference whereas the brown morph individuals do not.

Tikader (1982) has discussed the possible factors associated with colour variation in animals, such as (a) altitude, latitude and longitude, (b) climate, (c) rainfall,